REMARKS

By this amendment, Applicant cancels claims 1, 5, and 9, without prejudice or disclaimer of the subject matter thereof; and amends claims 2, 3, 6, 7, 10 and 11 to correct claim dependencies and to more appropriately define the present invention. Claims 2-4, 6-8, and 10-12 remain pending.

In the Office Action, the Examiner rejected claims 1, 5, and 9 under 35 U.S.C.§102(b) as being anticipated by Shared Memory RAM Disk for a Cluster with Shared Memory, IBM Technical Disclosure Bulletin, June 1993, Vol. 36, Issue number 6B pp. 299-300 (hereinafter "IBM"); and rejected claims 2-4, 6-8, and 10-12 under 35 U.S.C. §103(a) as being unpatentable over IBM in view of U.S. Patent No. 5,860,146 to Vishin et al. (hereinafter "Vishin").

Applicant appreciates the Examiner's thorough examination of this application, especially the detailed citations which aided Applicant in reviewing the Examiner's comments. Nevertheless, Applicant respectfully traverses the rejections for the following reasons.

Regarding Claim Rejections under 35 U.S.C. § 102(b)

In order to properly anticipate Applicant's claimed invention under 35 U.S.C. § 102, each and every element of the claim in issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Further, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." See M.P.E.P. § 2131, quoting Richardson v. Suzuki Motor Co., 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Claims 2 and 3, as amended, call for combinations including, for example, "means for allocating a cluster shared memory lock corresponding to the lock function of

the cluster file system and enabling exclusive read and write access to the mapped data in the shared memory area for maintaining data consistency on the shared memory." IBM discloses "a program to create a RAM disk for a cluster of processors which have separate I/O subsystems but a global shared memory." IBM, Disclosure Text at preamble. The RAM disk is implemented by a pseudo-device driver running on each processor, the device driver provides the interfaces to the RAM disk as config(), open(), close(), read(), write(), strategy(), and ioctl(). IBM, Disclosure Text at para. 4. IBM also discloses that "software locks can be added on each 4K block of the shared memory RAM disk data area to provide consistency even if two (or more) processors attempt to write the same block of shared memory at the same time." IBM, Disclosure Text at para. 6. However, IBM fails to disclose "means for allocating a cluster shared memory lock corresponding to the lock function of the cluster file system and enabling read and write exclusive access to the mapped data in the shared memory area for maintaining data consistency on the shared memory," as required by claims 2 and 3.

IBM merely mentions that there could be "software locks" added on each 4K block to control the writing access to the shared memory RAM disk in order to prevent data inconsistency. The "software locks" in IBM, however, do not have "exclusive read and write access to" the mapped data in the share memory area in that only "writing the same block of shared memory at the same time" can be prevented, while read access is not disclosed. Therefore, IBM does not teach "means for allocating a cluster shared memory lock corresponding to the lock function of the cluster file system and enabling

exclusive read and write access to the mapped data in the shared memory area for maintaining data consistency on the shared memory," as required by claims 2 and 3.[1]

In light of the above remarks, Applicant respectfully submits that IBM fails to disclose each and every element of claims 2 and 3, thus, claims 2 and 3 are not anticipated by IBM under 35 U.S.C. § 102(b). Although claims 6, 7, 10 and 11 are of different scope than claims 2 and 3, they contain some similar recitations. Thus, Applicant also submits that claims 6, 7, 10, and 11 are not anticipated by IBM under 35 U.S.C. § 102(b) for the same reasons stated above.

Regarding Claim Rejections under 35 U.S.C. § 103(a)

In order to establish a prima facie case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim elements. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or to combine reference teachings. Third, there must be a reasonable expectation of success. See M.P.E.P. § 2143.

Claims 2 and 3, as amended, call for combinations including, for example, "means for allocating a cluster shared memory lock corresponding to the lock function of the cluster file system and enabling exclusive read and write access to the mapped data in the shared memory area for maintaining data consistency on the shared memory."

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[1] In fact, IBM does not disclose any file system in the disclosure. The Examiner apparently treated the RAM disk and its associated device driver as the cluster file system, however, the RAM disk is only a data storage and the device driver only provides the interfaces to the RAM disk, neither of them, alone or combined, can be a file system. Therefore, IBM fails to disclose any file system, not mention the cluster file system as disclosed by the present invention.

As asserted above, IBM fails to teach or suggest "means for allocating a cluster shared memory lock corresponding to the lock function of the cluster file system and enabling exclusive read and write access to the mapped data in the shared memory area for maintaining data consistency on the shared memory" as required by claims 2 and 3. Vishin fails to cure IBM's deficiency. Vishin only discloses a virtual memory management method to assist in accessing data in remote address spaces, but does not disclose or suggest either "allocating a cluster shared memory lock corresponding to the lock function of the cluster file system" or "enabling exclusive read and write access to the mapped data in the shared memory area for maintaining data consistency on the shared memory," as required by claims 2 and 3.

Therefore, neither IBM nor Vishin, taken alone or reasonably combined, teaches or suggests all the elements of claims 2 and 3. Moreover, there is no suggestion in the reference to modify the structures disclosed therein to achieve the claimed combination. Applicant respectfully submits that a prima facie case of obviousness can not be established, thus, claims 2 and 3 are nonobvious over IBM in view of Vishin under 35 U.S.C. § 103(a). Furthermore, "[i]f an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious." M.P.E.P. § 2143.03, quoting In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Because claim 4 depends on claim 3, Applicant further submits that claim 3 is nonobvious over IBM in view of Vishin under 35 U.S.C. § 103(a). Applicant respectfully requests withdrawal of the rejection of claims 2-4.

Although claims 6, 7, 10, and 11 are of different scope than claims 2 and 3, they contain some similar recitations. Thus, Applicant submits that claims 6, 7, 10, and 11

are nonobvious over IBM in view of Vishin under 35 U.S.C. § 103(a) for the same reasons stated above. Applicant also submits that claims 8 and 12 are nonobvious over IBM in view of Vishin under 35 U.S.C. § 103(a) because claim 8 depends on claim 7 and claim 12 depends claim 11. Applicant respectfully requests withdrawal of the rejection of claims 6-8 and 10-12.

Conclusion:

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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